



The Montana Analysis and Reporting System MARS

MARS Training


Sponsored by the Office of Public Instruction






Analysis and Reporting System – Topics



- Introduction/Background
- Assessment Techniques & Tools
- CRT Data Analysis
- Accessing MARS
- The Home page
- Account Management
- Interactive
- Reporting
- Classroom Accounts – what can be accessed
- System Accounts – what can be accessed
- Supplementary Material/Contact Info
- Q & A / Feedback






Analysis and Reporting System – Introduction


- Web-based system for analysis of student results and for generating reports.
- Data can be exported as .XLS, .CSV, or PDF.
- Teachers can be assigned to student rosters so that they can access data for their students (only).
- Data in tables can be manipulated within the browser window without page reload.
- Secure website (SSL).







Analysis and Reporting System – System Availability


- MontCAS CRT assessment window was March 1 – March 24, 2010.
- The Montana Analysis and Reporting System (MARS) was released the first week of June 2008.
- Passwords were mailed to System Test Coordinators May 13, 2008.
- Reading and Math results are available for Grades 3-8 and 10. Science results are available for Grades 4, 8, and 10.






Analysis and Reporting System – Background


- The Montana Criterion Referenced Test (CRT) compares a student against the Montana standards for the purpose of improvement in curriculum, instruction, and student learning.
- All schools in Montana should have seven years of CRT data.
- Currently given to grades 3-8 and 10 in Reading and Math; grades 4, 8, and 10 in Science.
- Types of items on test:
 - Multiple choice – Reading, Math, and Science
 - Short answer – only Math
 - Constructed response – Reading, Math, and Science
- The CRT consists of common (scored) and embedded field test items.
 - Large pool of field test items
 - Field test items become common items in future tests
- Only common items are used for scoring.





Reading and Math Content Standards

- The Spring 2010 and 2011 CRT and CRT-Alternate are aligned to previous Reading and Math content standards not current content standards.
- Until 2012, the previous standards are posted on the released items and MARS sites and should be used with the Spring 2010 and 2011 released items and MARS data.
- Spring 2010 released items site:
http://www.opi.mt.gov/curriculum/MontCAS/#p7GPc1_8
- MontCAS Presents MARS site:
http://www.opi.mt.gov/curriculum/MontCAS/#p7GPc1_3





Science Content Standards

- The current Science CRT and CRT-Alternate are aligned to the current Science standards and are at the site with the current Reading and Math standards site:
http://www.opi.mt.gov/Curriculum/Index.html?gpm=1_8#p7GPc1_8



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Analysis and Reporting System – Background

- The CRT Gives You Data For:
- Individual Students
- Class or Grade Level
- Subgroups
- School
- District
- State



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Analysis and Reporting System – Assessment Techniques & Tools

- Look for trends, patterns, or clusters in the data.
- Analyze data from multiple choice & constructed response separately.
- Base decisions on more than one data point.
- Look at data for insight into:
 - Curriculum
 - Instruction
 - Student Achievement
- Share the data appropriately
 - Teachers
 - Parents
 - Students





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Analysis and Reporting System –
 CRT Data Analysis


- Analyze
 - Test Questions
 - Questions & answers related to each Montana standard
 - Correct answers vs. incorrect answers
 - Percentage of correct responses for each standard for multiple choice and constructed response
 - Subgroup statistics
 - Class or district performance vs. the state results
 - The process used by students to arrive at an incorrect response
 - Proficient student responses vs. non-proficient student responses






Analysis and Reporting System –
 CRT Data Analysis


- Multiple Choice Questions
 - What MT Standard is being assessed?
 - What do students need to know to answer the question?
 - What strategies would they use to get the correct answer?
 - What misconceptions or incorrect processes might lead to each incorrect response?
 - What are the implications for instruction?






Analysis and Reporting System –
 CRT Data Analysis

- Constructed Response Questions
 - What do students need to know to answer the question?
 - What are the main requirements for a scale 4 answer?
 - What would be needed to convert a scale 3 response to a scale 4 response?
 - What are the implications for instruction?






Analysis and Reporting System –
CRT Data Analysis

Released Items


- Scored items are released annually
 - 50% of the items were released in 2010, 2009, 2008, and 2007. 100% of the items were released in previous years.
 - There is a Released Items tab within *MARS* that can be used to access the current year's released items.
 - You can view multiple years of released items for each grade and subject on the OPI website at:
http://www.opi.mt.gov/curriculum/MontCAS/#gpm1_8
 - Click on the Released Items tab, then the year you would like to view for
 - Multiple choice, constructed response, and math short answer items
 - Math vocabulary, answer keys
 - Scoring rubrics, and examples of student work for constructed response items



Analysis and Reporting System –
CRT Data Analysis

Released Items (Cont.)


On the released items table of contents – please look at: CRT Math Vocabulary Lists for grades 3-8 & 10. The math vocabulary used on the test is listed in this file – you may want to make sure that these terms are included in math instruction.



Analysis and Reporting System –
CRT Data Analysis


Navigating and Using *MARS*

The next series of slides shows how to find and use different features of *MARS*.



Analysis and Reporting System – Accessing MARS

- Access the Analysis and Reporting System via the Measured Progress iServices website: <http://iservices.measuredprogress.org>
- Select 'Montana' from the state/contract dropdown menu and select Enter.






Analysis and Reporting System – Accessing MARS


- Click on MARS to launch the login screen.






Analysis and Reporting System – Accessing MARS


- System-level Test Coordinators and School Principals received their login account information from Measured Progress / OPI in May 2008.
- Enter the appropriate User Name and Password (system or school) then click on "Log In".







Analysis and Reporting System – Home Page

- After login, the Home page appears. School major (Principal) view:




- Links: Home, Reports, Interactive, Released Items, Account Management, Help, Logout, View User Manual.







Analysis and Reporting System – Accessing MARS

- At the school-level, there are only two account types:
 - Principal Account
 - Classroom Account (Teachers)
- Classroom accounts will be front-loaded by Measured Progress.
- Principals will have access to a report within MARS which will contain all Classroom Account login information.
 - This report contains information only if the “sort by” field in AIM was completed.
- Principals will be required to assign the Classroom Accounts to their corresponding student roster groups (Student Assignment)

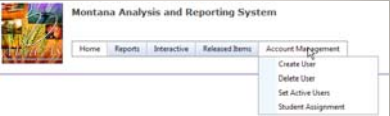








Analysis and Reporting System – Account Management

- Account Management. Principals can create, delete, and activate accounts, as well as assign Classroom Accounts (teachers) to student rosters via Student Assignment.







Analysis and Reporting System – Account Management

- Create User:

Account Management/Create User

Create User

Sign Up for your New Account

User Name:


Password:


Confirm Password:

Test Name

☐ Grade 03 Mathematics
☐ Grade 03 Reading
☐ Grade 04 Mathematics
☐ Grade 04 Reading
☐ Grade 04 Science
☐ Grade 05 Mathematics
☐ Grade 05 Reading

Create User





Analysis and Reporting System – Account Management


- Delete User:


Account Management/Delete User

Delete User

User Name:

Delete User
- Select the user you would like to delete from the dropdown menu then click on "Delete User".





Analysis and Reporting System – Account Management

- Set Active Users:

Account Management/Set Active Users

Set Active Users

User Name

☒ MILLER
☒ Mr. E
☒ Mr. G
☒ Mr. THOMAS
☒ Mr. T
☒ Mrs. C
☒ Mrs. G

- Student Assignment:


Student Assignment


User:

Grade:

Assign

<input type="checkbox"/>	Last Name	First Name	MSL	Grade	Birth Date	Student Identifier
<input type="checkbox"/>	JORDON			04		
<input type="checkbox"/>	JORDON			04		
<input type="checkbox"/>	JORDON			04		





Analysis and Reporting System – Interactive

- Performance Level Summary
 - From the Interactive dropdown, select Performance Level Summary
 - Enter values in Basic Filtering Options. Choose a Filter by Group. Data will automatically display.
 - Advanced Filtering Options can be selected to further refine data.

Filter by Group:

School Year

Custom PDF Title


Enter a custom report title up to 400 characters for PDF output or chart output.


Export in PDF Format

Export Chart

Performance Level	Count	Percentage
Advanced	10	25%
Proficient	20	42%
Emerging Proficiency	27	27%
Novice	4	4%

* Percentages may not total exactly 100% due to applied rounding.





Analysis and Reporting System – Interactive

- Item Analysis
 - From the Interactive dropdown, select Item Analysis
 - Enter values in Basic Filtering Options. Choose a Filter by Group. Data will automatically refresh and display as values are changed.
 - Advanced Filtering Options can be selected to further refine data.
 - Multiple Choice and Constructed Response results are displayed separately. For Multiple Choice, Count and Percent values can be selected.

Filter by Group:

School Year

Custom PDF Title

Enter a custom report title up to 400 characters for PDF output or chart output.

Export in PDF Format

Export Chart

Multiple Choice


Course Percent


View Item	Released Item	Standard	Correct (#)	A (#)	B (#)	C (#)	D (#)	IR	Correct Response
1	2	40	3	40	13	10	1	B	
2	3	30	4	7	30	5	1	C	
3	2	30	4	7	30	5	1	A	
4	3	30	4	7	30	5	1	C	
5	2	40	3	40	13	10	1	B	
6	3	40	3	40	13	10	1	A	
7	3	30	4	7	30	5	1	C	
8	3	40	3	40	13	10	1	A	
9	3	40	3	40	13	10	1	A	
10	3	40	3	40	13	10	1	A	
11	3	40	3	40	13	10	1	A	
12	3	40	3	40	13	10	1	A	
13	3	40	3	40	13	10	1	A	
14	3	40	3	40	13	10	1	A	
15	3	40	3	40	13	10	1	A	
16	3	40	3	40	13	10	1	A	
17	3	40	3	40	13	10	1	A	
18	3	40	3	40	13	10	1	A	
19	3	40	3	40	13	10	1	A	
20	3	40	3	40	13	10	1	A	
21	3	40	3	40	13	10	1	A	
22	3	40	3	40	13	10	1	A	
23	3	40	3	40	13	10	1	A	
24	3	40	3	40	13	10	1	A	
25	3	40	3	40	13	10	1	A	
26	3	40	3	40	13	10	1	A	
27	3	40	3	40	13	10	1	A	
28	3	40	3	40	13	10	1	A	
29	3	40	3	40	13	10	1	A	
30	3	40	3	40	13	10	1	A	
31	3	40	3	40	13	10	1	A	
32	3	40	3	40	13	10	1	A	
33	3	40	3	40	13	10	1	A	
34	3	40	3	40	13	10	1	A	
35	3	40	3	40	13	10	1	A	
36	3	40	3	40	13	10	1	A	
37	3	40	3	40	13	10	1	A	
38	3	40	3	40	13	10	1	A	
39	3	40	3	40	13	10	1	A	
40	3	40	3	40	13	10	1	A	
41	3	40	3	40	13	10	1	A	
42	3	40	3	40	13	10	1	A	
43	3	40	3	40	13	10	1	A	
44	3	40	3	40	13	10	1	A	
45	3	40	3	40	13	10	1	A	
46	3	40	3	40	13	10	1	A	
47	3	40	3	40	13	10	1	A	
48	3	40	3	40	13	10	1	A	
49	3	40	3	40	13	10	1	A	
50	3	40	3	40	13	10	1	A	
51	3	40	3	40	13	10	1	A	
52	3	40	3	40	13	10	1	A	
53	3	40	3	40	13	10	1	A	
54	3	40	3	40	13	10	1	A	
55	3	40	3	40	13	10	1	A	
56	3	40	3	40	13	10	1	A	
57	3	40	3	40	13	10	1	A	
58	3	40	3	40	13	10	1	A	
59	3	40	3	40	13	10	1	A	
60	3	40	3	40	13	10	1	A	
61	3	40	3	40	13	10	1	A	
62	3	40	3	40	13	10	1	A	
63	3	40	3	40	13	10	1	A	
64	3	40	3	40	13	10	1	A	
65	3	40	3	40	13	10	1	A	
66	3	40	3	40	13	10	1	A	
67	3	40	3	40	13	10	1	A	
68	3	40	3	40	13	10	1	A	
69	3	40	3	40	13	10	1	A	
70	3	40	3	40	13	10	1	A	
71	3	40	3	40	13	10	1	A	
72	3	40	3	40	13	10	1	A	
73	3	40	3	40	13	10	1	A	
74	3	40	3	40	13	10	1	A	
75	3	40	3	40	13	10	1	A	
76	3	40	3	40	13	10	1	A	
77	3	40	3	40	13	10	1	A	
78	3	40	3	40	13	10	1	A	
79	3	40	3	40	13	10	1	A	
80	3	40	3	40	13	10	1	A	
81	3	40	3	40	13	10	1	A	
82	3	40	3	40	13	10	1	A	
83	3	40	3	40	13	10	1	A	
84	3	40	3	40	13	10	1	A	
85	3	40	3	40	13	10	1	A	
86	3	40	3	40	13	10	1	A	
87	3	40	3	40	13	10	1	A	
88	3	40	3	40	13	10	1	A	
89	3	40	3	40	13	10	1	A	
90	3	40	3	40	13	10	1	A	
91	3	40	3	40	13	10	1	A	
92	3	40	3	40	13	10	1	A	
93	3	40	3	40	13	10	1	A	
94	3	40	3	40	13	10	1	A	
95	3	40	3	40	13	10	1	A	
96	3	40	3	40	13	10	1	A	
97	3	40	3	40	13	10	1	A	
98	3	40	3	40	13	10	1	A	
99	3	40	3	40	13	10	1	A	
100	3	40	3	40	13	10	1	A	

Constructed Response

Course Percent

View Item	Released Item	Standard	Point Value	Average Score
1	2	1	0.0	
2	3	4	2.3	
3	2	1	0.0	





Analysis and Reporting System - Interactive

- Item Analysis
 - Items within the Item Analysis can be sorted within the table without having to refresh the window.
 - Sort by: Released Item, Standard, Correct (#), A(#), B(#), C(#), D(#), IR, or Correct Response. It will sort smallest to greatest.

Filter by Group:

School Year

Custom PDF Title

Enter a custom report title up to 400 characters for PDF output or chart output.


Export in PDF Format

Export Chart

Multiple Choice

Course Percent

View Item	Released Item	Standard	Correct (#)	A (#)	B (#)	C (#)	D (#)	IR	Correct Response
1	2	40	3	40	13	10	1	B	
2	3	30	4	7	30	5	1	C	
3	2	40	3	40	13	10	1	A	
4	3	40	3	40	13	10	1	A	
5	2	40	3	40	13	10	1	B	
6	3	40	3	40	13	10	1	A	
7	3	40	3	40	13	10	1	A	
8	3	40	3	40	13	10	1	A	
9	3	40	3	40	13	10	1	A	
10	3	40	3	40	13	10	1	A	
11	3	40	3	40	13	10	1	A	
12	3	40	3	40	13	10	1	A	
13	3	40	3	40	13	10	1	A	
14	3	40	3	40	13	10	1	A	
15	3	40	3	40	13	10	1	A	
16	3	40	3	40	13	10	1	A	
17	3	40	3	40	13	10	1	A	
18	3	40	3	40	13	10	1	A	
19	3	40	3	40	13	10	1	A	
20	3	40	3	40	13	10	1	A	
21	3	40	3	40	13	10	1	A	
22	3	40	3	40	13	10	1	A	
23	3	40	3	40	13	10	1	A	
24	3	40	3	40	13	10	1	A	
25	3	40	3	40	13	10	1	A	
26	3	40	3	40	13	10	1	A	
27	3	40	3	40	13	10	1	A	
28	3	40	3	40	13	10	1	A	
29	3	40	3	40	13	10	1	A	
30	3	40	3	40	13	10	1	A	
31	3	40	3	40	13	10	1	A	
32	3	40	3	40	13	10	1	A	
33	3	40	3	40	13	10	1	A	
34	3	40	3	40	13	10	1	A	
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37	3	40	3	40	13	10	1	A	
38	3	40	3	40	13	10	1	A	
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63	3	40	3	40	13	10	1	A	
64	3	40	3	40	13	10	1	A	
65	3	40	3	40	13	10	1	A	
66	3	40	3	40	13	10	1	A	
67	3	40	3	40	13	10	1	A	
68	3	40	3	40	13	10	1	A	
69	3	40	3	40	13	10	1	A	
70	3	40	3	40	13	10	1	A	
71	3								



Analysis and Reporting System – Reports


- Once Basic Filtering Options have been selected:
 - Select Reports you would like to download.
 - Select Download.
 - Save report(s) to computer. As with other reports, it will be compressed.


Reports

☐ Report Name
☒ School Summary - Mathematics
☒ School Summary - Reading
☒ School Summary - Science

Download


- The number of students on your summary reports may not match the number of students on your roster. Students who were not enrolled the entire year are not included on your summary reports, but are included on the roster.






Analysis and Reporting System – Confidentiality

- Extremely Important!
- The information on MARS is confidential and must be protected from viewing by unauthorized individuals.
 - Never leave your browser open to MARS when you are not directly working with the program.
 - Always completely close your browser and clear the history when you are done on your school computer or especially on any other computer.
 - Also, please remember if you export data or copy & paste data from MARS treat it with confidentiality.






CRT Performance Level Descriptors and Scaled Score Ranges (Samples)

Performance Level	Reading	Mathematics
Advanced	287-300	290-300
Proficient	250-266	250-289
Nearing Proficiency	225-249	225-249
Novice	200-224	200-224

Performance Level	Reading	Mathematics
Advanced	287-300	289-300
Proficient	250-266	250-288
Nearing Proficiency	225-249	225-249
Novice	200-224	200-224

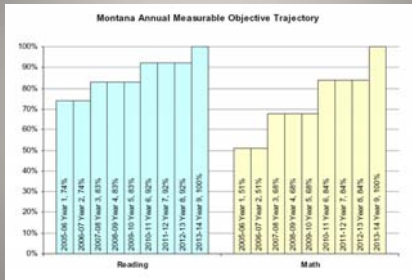
Performance Level	Reading	Mathematics
Advanced	288-300	289-300
Proficient	250-287	250-288
Nearing Proficiency	225-249	225-249
Novice	200-224	200-224

Performance Level	Reading	Mathematics	Science
Advanced	289-300	281-300	269-300
Proficient	250-288	250-280	250-268
Nearing Proficiency	225-249	225-249	225-249
Novice	200-224	200-224	200-224





Timeline for Improvement





Other Supplementary Material

- Montana Content Standards, Benchmarks, and Performance Descriptors
- Essential Learning Expectations
- http://www.opi.mt.gov/Curriculum/Index.html?gpm=1_8





MARS Help

- 2008 MARS User and Training Guide:
http://www.opi.mt.gov/curriculum/MontCAS/#p7GPc1_10
- Technical Support is available at the following:
 - E-Mail: MarsHelp@measuredprogress.org
 - Phone: (866) 632-7764





OPI Contact Information

- Judy Snow
 - State Assessment Director
 - 406-444-3656
 - jsnow@mt.gov
- Karen Richem
 - Assessment Specialist
 - 406-444-0748
 - krichem@mt.gov
- Gayle Allen
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